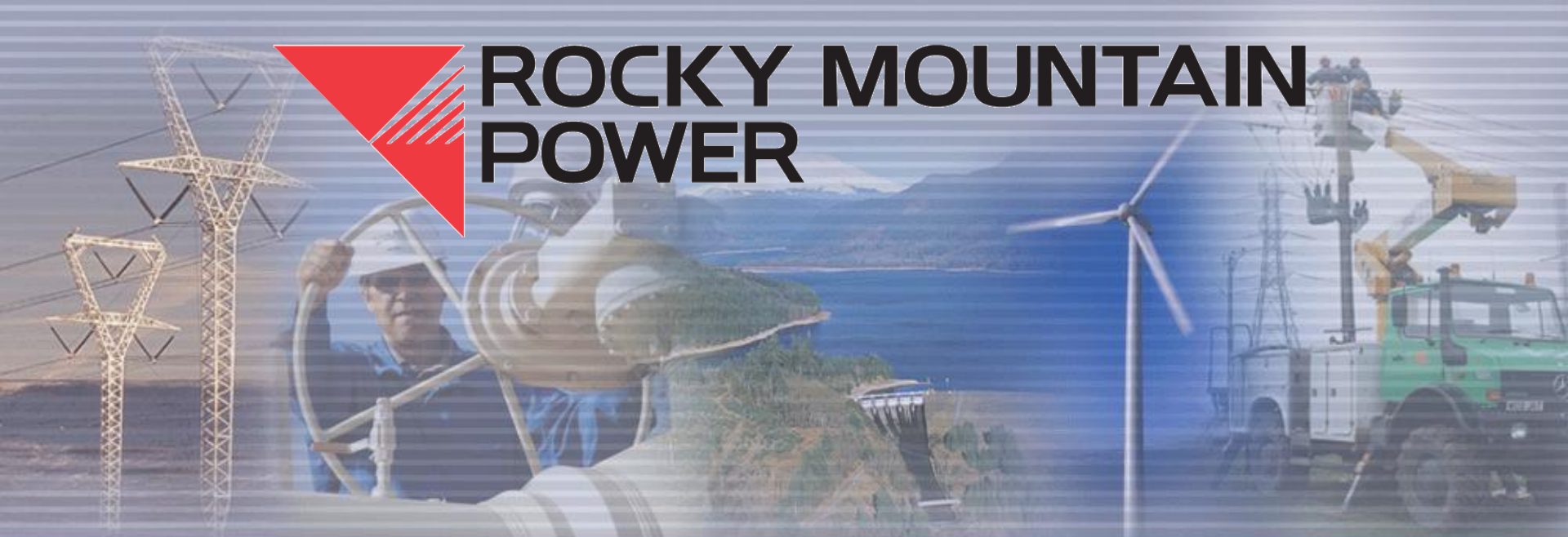




ROCKY MOUNTAIN POWER



RMP's Resource Planning

Utah Energy Forum

November 30, 2009

Richard Walje

President

Rocky Mountain Power

The Electricity Industry

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to heaven, we were all going direct the other way ...

Charles Dickens

A Tale of Two Cities

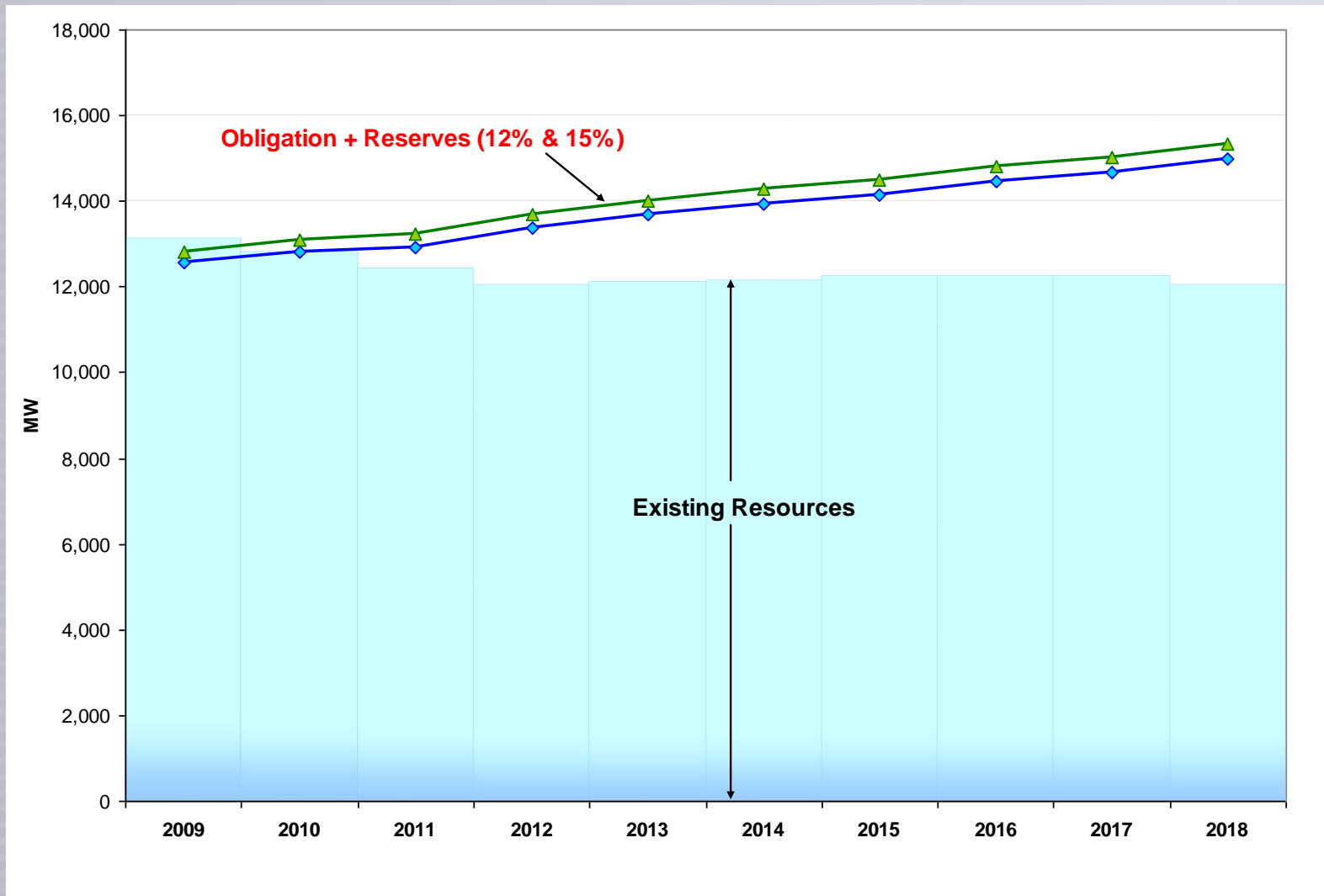
Why Do We Need To Plan?

- Obligation to serve all existing and new customers
- Regulatory requirements; risk adjusted, lowest cost resources
- State specific energy policies
- National policy requirements – uncertain today
- Long time to build assets
- Permitting takes years

The Process Is Simple – Or Not

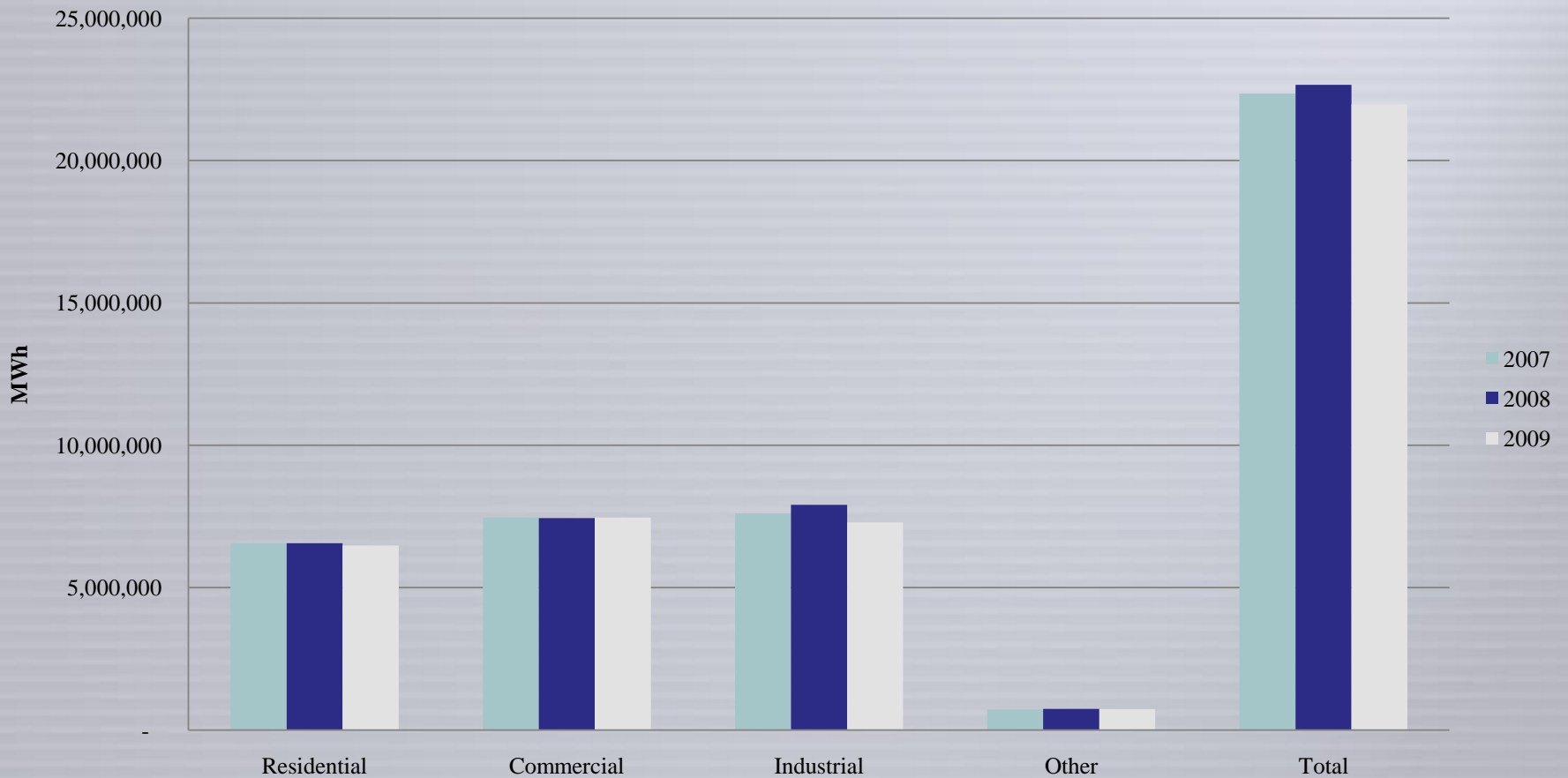
- Forecast load increase, or as last year, decrease
- Inventory available resources
- Twenty year time horizon
- Predict congressional actions
- Predict state & local actions
- Satisfy participants' personal objectives and desires
- Comply with multitudinous regulatory requirements
- Examine 5,700 Monte Carlo simulations
- Integrated resource planning requirements in six states

PacifiCorp's – Load & Resource Balance



The Recessionary Impact

Retail Loads State of Utah



Multi-state Integrated Planning

- States seldom agree on:
 - Objectives, planning process, resource types, selection process, the role of energy efficiency, utility options
- The process takes one to two years
- Information is usually out of date by process completion
- Outcome is not regulatory approval; just regulatory acknowledgement

Criteria for Resource Selection Process

- Utah – Public interest considering lowest reasonable cost, long-term and short-term impacts, risk, reliability, financial impacts on utility, and other relevant factors. Utah Code 54-17-201(2).
- An electric utility must conduct a solicitation (RFP) before acquiring or constructing a significant energy resource. Utah Code 54-17-201
- The UPSC must approve content and process of RFP, bidder shortlist and successful resource. Utah Code 54-17-201

Resource Restrictions

- OR precludes new nuclear in the state and CA permitting process would impose significant hurdle
- CA and WA emissions performance standards preclude new coal, regardless of location
- OR regulatory action would likely preclude new coal regardless of location
- Carbon adders for coal and gas have been included in analyses since 2003
- Current IRP includes a range of \$0 to \$100/ton

Resource Options

- Energy Efficiency
- Peak Demand Reduction
- Transmission
- Natural Gas – Combined and Single Cycle
- Net Metering
- Wind – Cost, Intermittency
- Solar? – Cost, Intermittency
- Battery? – Cost, Intermittency
- Smart Grid?

Programs to Manage Electricity Use

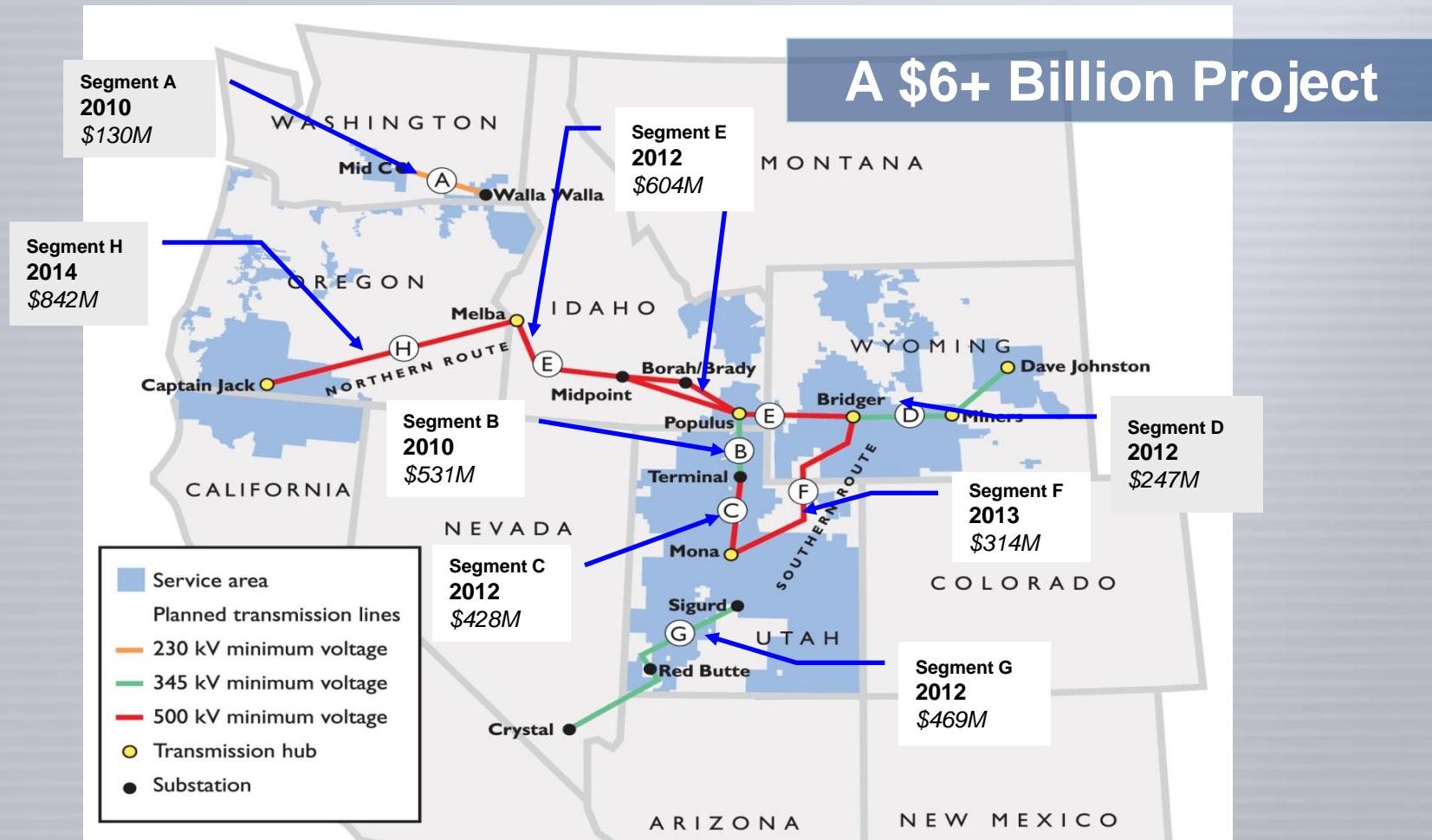
Commercial and Industrial

- Energy FinAnswer
- FinAnswer Express
- Large User Self-Direction
- Re-Commissioning program
- PowerForward
- Energy Exchange

Residential Programs

- Cool Keeper
- Cool Cash
- See 'Ya Later Refrigerator
- Home Energy Savings
- Energy Star New Homes
- Home Energy Analysis

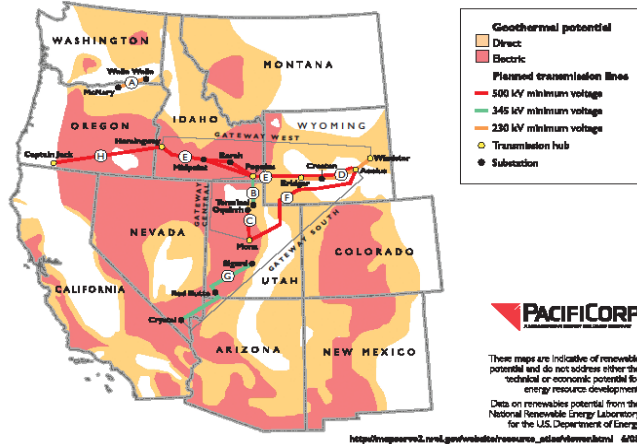
High Voltage Transmission Expansion



Access To Lower Cost Renewables

Energy Gateway Transmission Expansion

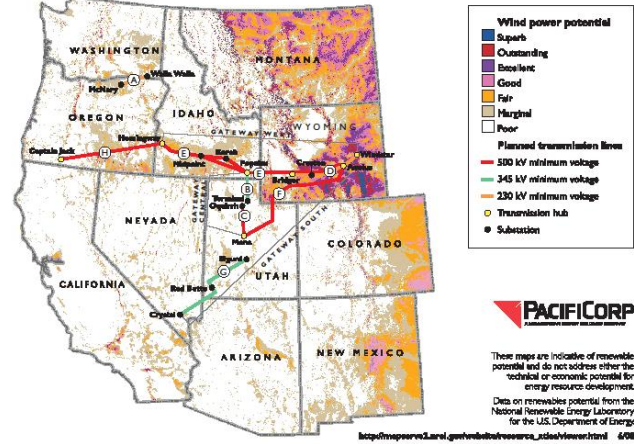
New transmission lines will provide access to areas with strong renewable energy development potential



PACIFICORP
A COMMITMENT TO ENERGY INNOVATION

Energy Gateway Transmission Expansion

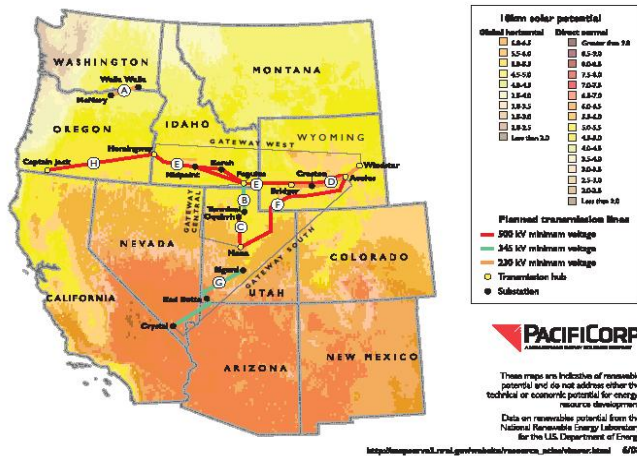
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PACIFICORP
A COMMITMENT TO ENERGY INNOVATION

Energy Gateway Transmission Expansion

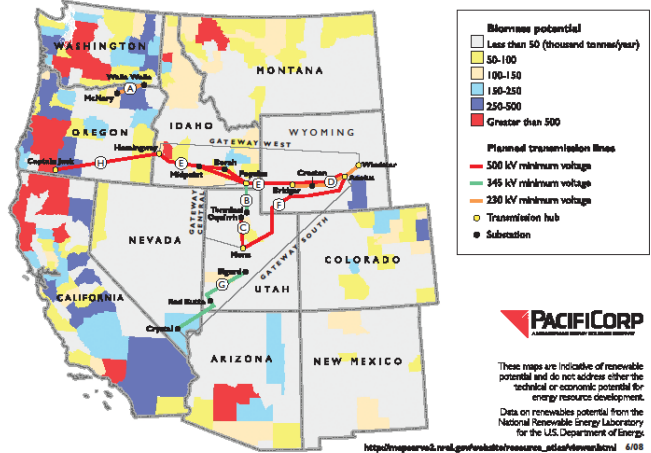
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Energy Gateway Transmission Expansion

New transmission lines will provide access to areas with strong renewable energy development potential



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Wind Energy Portfolios

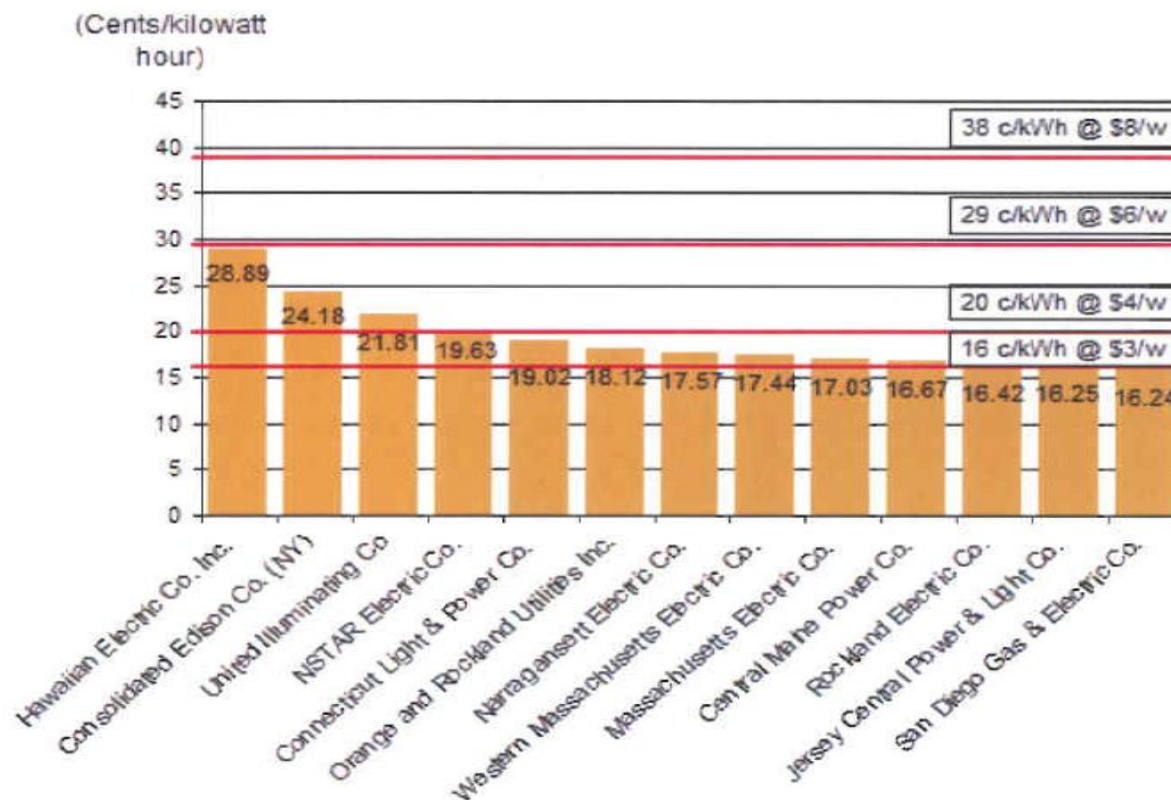
Utility	Under Contract MW (PPA)	Utility-Owned MW	Total MW
■ Xcel Energy	2779.5	126.9	2906.4
■ MidAmerican Energy (inc. PacifiCorp)	424.1	1858.3	2282.4
■ So. Ca. Edison	1137.0	0	1137.0
■ Pacific Gas & Electric	980.9	0	980.9
■ Luminant Energy	913.1	0	913.1

Source: American Wind Energy Association 2008 Annual Statistics on U.S. Wind Energy

Solar Photovoltaic Costs

Chart 1

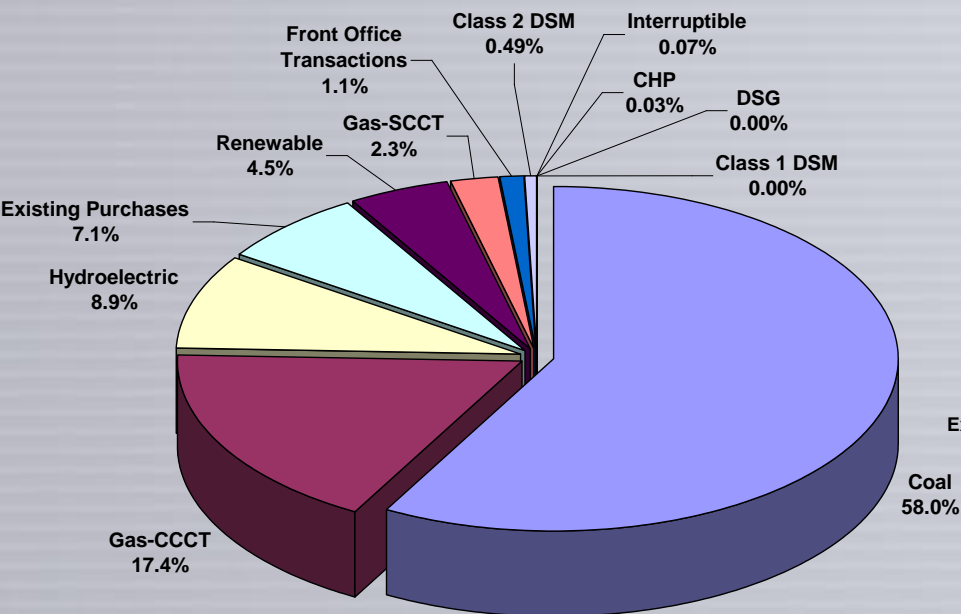
Levelized Costs Of Solar PV Versus Residential Electric Rates In Highest-Cost Markets



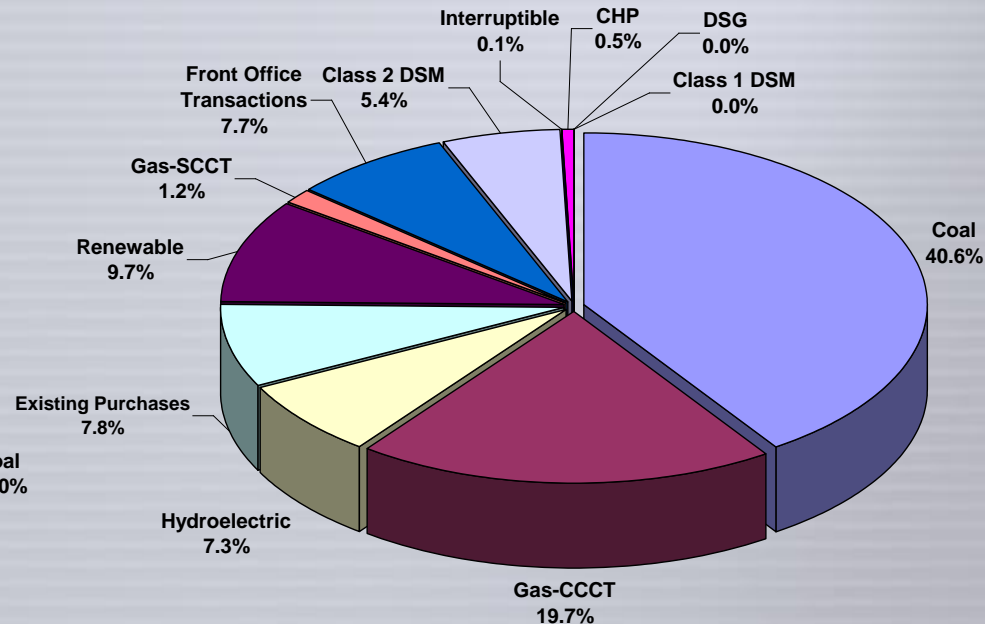
© Standard & Poor's 2009.

PacifiCorp's 2008 IRP Results

2009

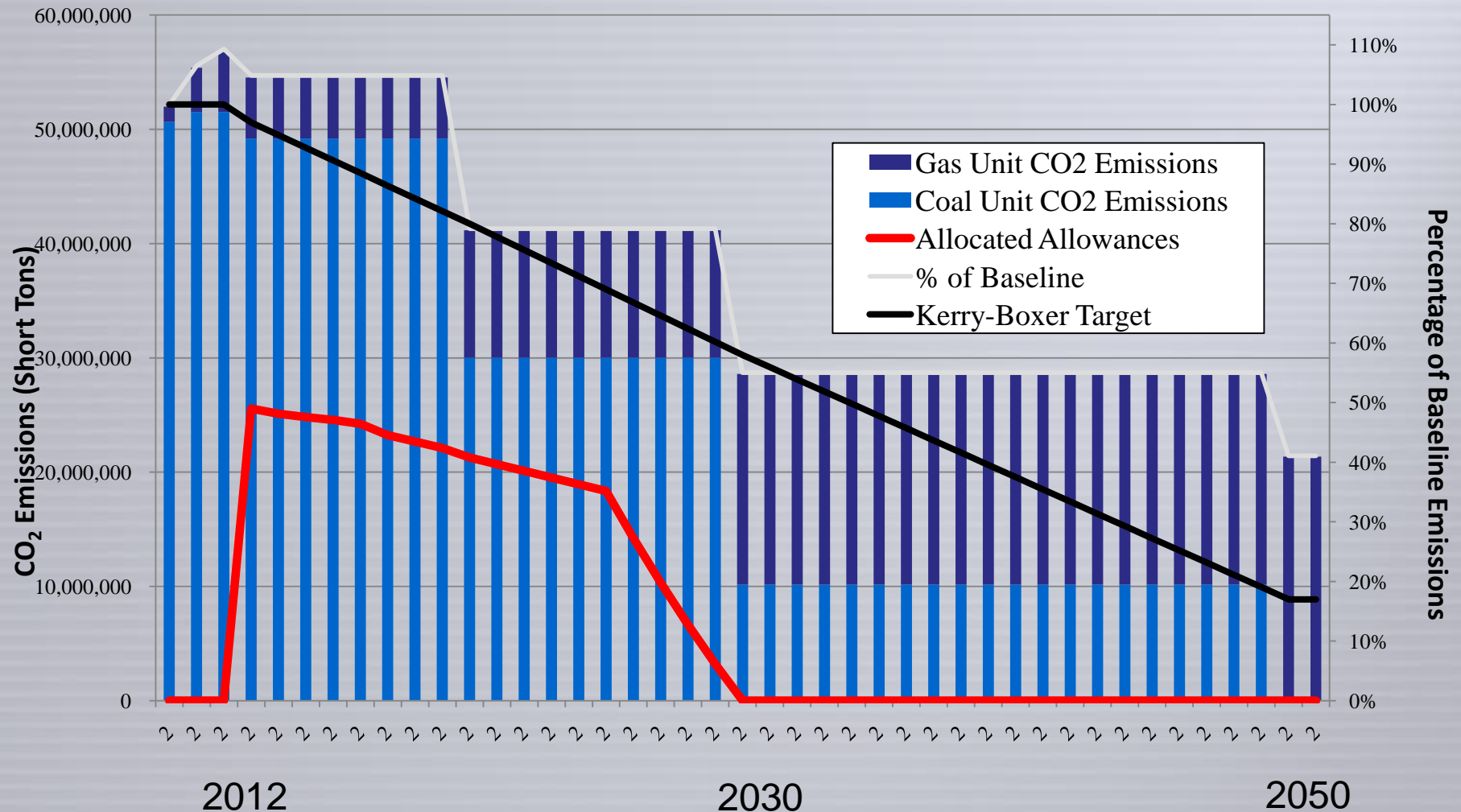


2018



Inadequate Free CO₂ Allowances

PacifiCorp: Kerry-Boxer Impacts



What Will Kerry-Boxer Cost Utahans?

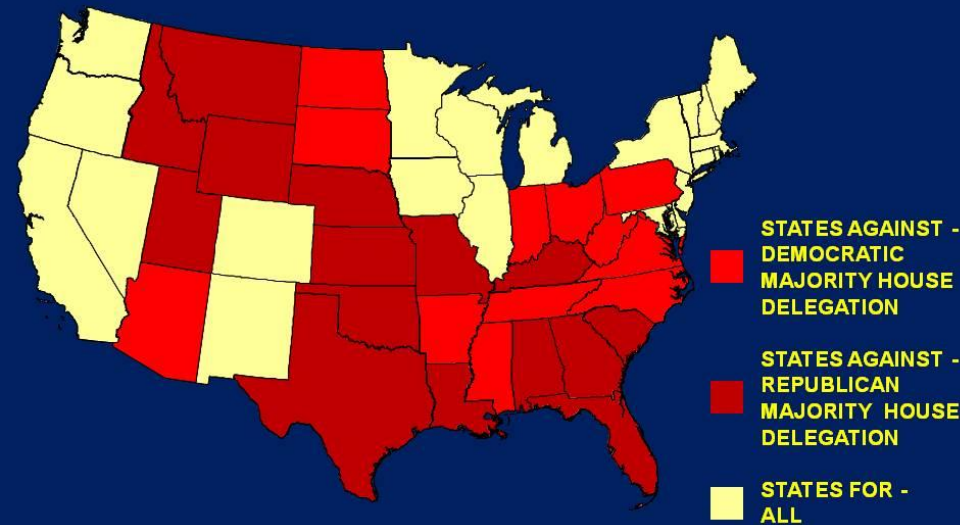
Because PacifiCorp is under allocated 27,000,000 emissions allowances under Kerry-Boxer it will have to buy these allowances in the trading “market”

At \$10/ton Utah's share is \$111,052,080

	Present Rev	MWh	Additional Generation Expense	% of Present Rev
Residential	\$571,787,591	6,613,981	\$37,341,579	6.5%
Commercial	\$510,114,012	7,076,131	\$39,950,811	7.8%
Industrial	\$292,554,561	5,876,855	\$33,179,872	11.3%
Special Contracts	\$82,842,982	2,419,273		
Other	\$14,791,937	102,698	\$579,818	3.9%
Total	\$1,472,091,083	22,088,938	\$111,052,080	7.5%

Waxman-Markey Vote – The Impact

HEARTLAND SAYS NO TO WAXMAN-MARKEY *Democrats in Midwest and South Oppose CA, MA*



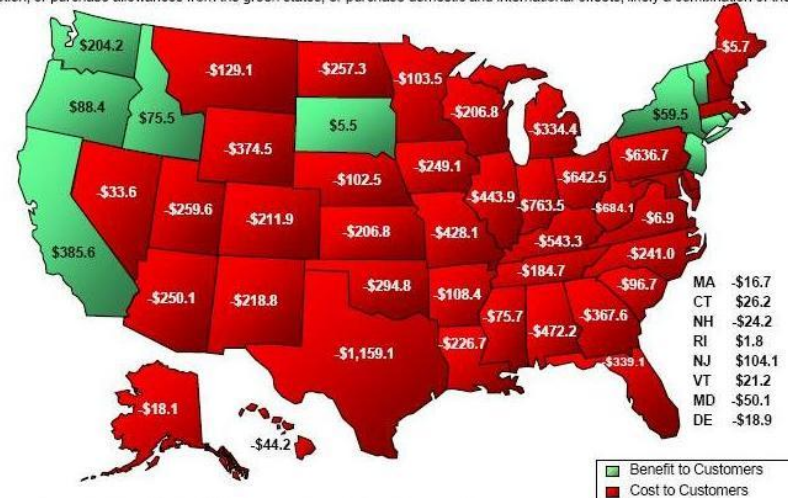
House Roll Call Vote #477 on H.R. 2454, American Clean Energy and Security Act, 6/26/09 - 44 Democrats Voted Against Waxman-Markey

The Impact

The Vote

Consumers in red colored states will pay more for electricity to make up for the shortfall in allowances (dollars in millions).

Based on the allowance allocation formula in H.R. 2454 for electricity consumers, the red states will not have enough allowances to cover their emissions from electricity generation. The shortfall in allowances to the red states will lead to higher electricity costs for consumers, the total of which will roughly correlate with the dollar losses noted on the map. For example, Texas electricity consumers will see electricity costs go up by roughly \$1.15 billion. To make up the shortfall, red states will have to seek high-cost, non-CO₂ emitting electricity sources, reduce electricity production and consumption, or purchase allowances from the green states, or purchase domestic and international offsets, likely a combination of the three.

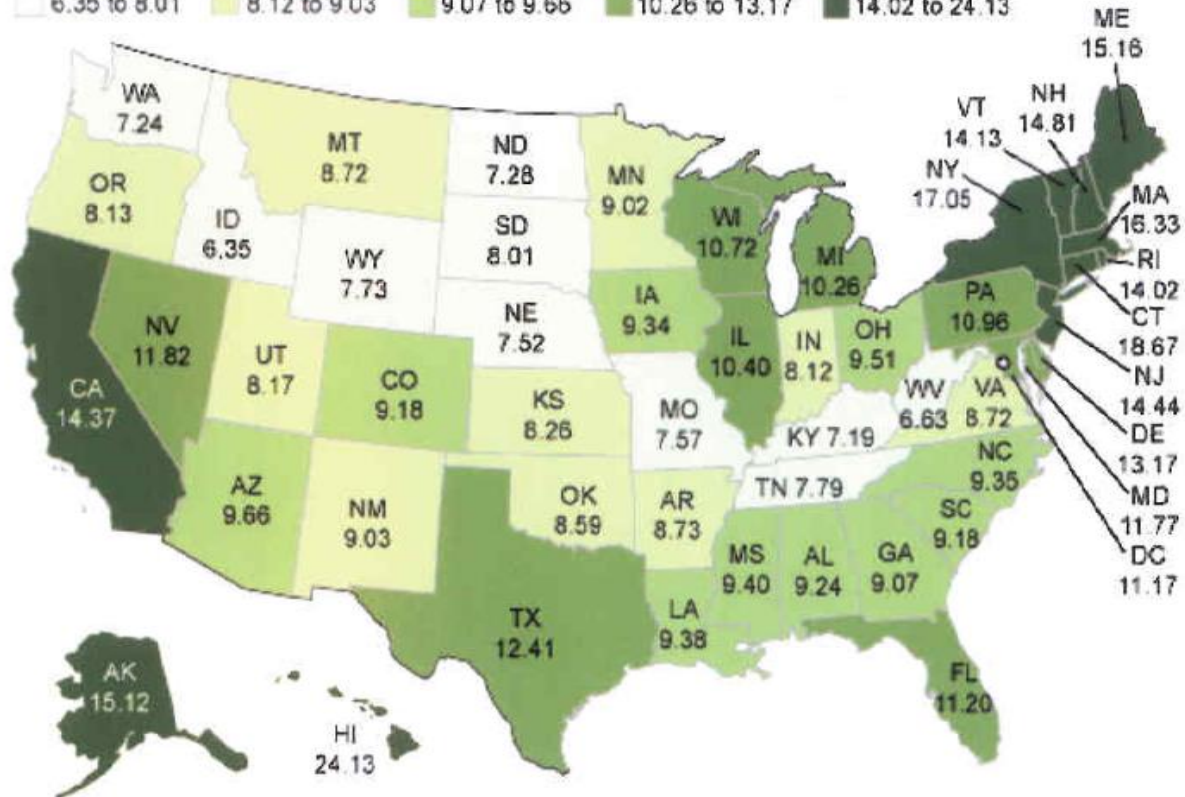


Today's Electricity Costs

U.S. Residential Rates In 2007

Residential average price (cents per kWh)

6.35 to 8.01 8.12 to 9.03 9.07 to 9.66 10.26 to 13.17 14.02 to 24.13



Source: U.S. Energy Information Administration.

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